

NEELESHWARI MEHRA

AI Engineer | AI Full Stack Developer | MERN Stack Developer | Blockchain Developer | 9+ Yrs in Software Engineering | **Mobile** → **Full Stack Web** → **AI Full Stack Web** + **Blockchain**

Indore, India | +91 94078-70778 (Call & Whatsapp) | Open to Remote Work | Immediate Joiner | theneeshwari@gmail.com | <https://web3.neeleeshwarimehra.space/> | github.com/neeleshwarimehra | [linkedin.com/in/theneeshwarimehra](https://www.linkedin.com/in/theneeshwarimehra)

PROFESSIONAL SUMMARY

Innovative Software Engineer with 9+ years of production experience architecting high-scale web platforms, enterprise AI systems (RAG / LLMs), and secure distributed applications, backed by an IIT Kanpur & Simplilearn 6-Month Professional Certification in Blockchain Technology & Development. Demonstrates deep expertise across the complete decentralized stack—from Solidity smart contract design (EVM, ERC standards, access control, reentrancy defense) and Web3 dApp integration (Ethers.js, Web3.js, MetaMask) to production Full-Stack Web engineering (React, Next.js, TypeScript, Node.js, Python/FastAPI) and AI pipelines (Vector embeddings, LangChain, semantic retrieval). Proven track record building mission-critical national platforms at Prasar Bharati serving millions of users, delivering enterprise AI support assistants, and architecting tamper-proof decentralized financial and supply chain workflows. Immediate joiner open to senior Blockchain, AI, and Full-Stack Web3 engineering roles.

TECHNICAL SKILLS & CORE COMPETENCIES

- **Blockchain & Web3 (Simplilearn & IIT Kanpur Certified):** Solidity (0.8.x), Ethereum Virtual Machine (EVM), Smart Contract Design & Architecture, Hardhat, Truffle, Remix IDE, OpenZeppelin (ERC-20, ERC-721, ERC-1155), Sepolia Testnet, Ganache, Ethers.js, Web3.js, MetaMask Integration, Hyperledger Fabric, Smart Contract Auditing & Security (Reentrancy, Checks-Effects-Interactions).
- **Artificial Intelligence & LLMs:** Generative AI, Retrieval-Augmented Generation (RAG) Architecture, Large Language Models (LLMs), Document Ingestion & Semantic Chunking, Vector Embeddings & Vector Search, LangChain, Prompt Engineering, Python AI Endpoints.
- **Full-Stack Web Development:** React.js, Next.js, TypeScript, JavaScript (ES6+), Node.js, Express.js, Redux Toolkit, Context API, Tailwind CSS, HTML5, CSS3/SASS, Bootstrap 5, RESTful APIs, WebSockets, PHP (Laravel), Microservices Architecture.
- **Backend, Mobile & Databases:** Python (FastAPI), PostgreSQL, MySQL, MongoDB, Mongoose, SQLite, Redis Caching, Ionic, Capacitor, Swift (iOS), Flutter/Dart, React Native, Database Schema Optimization & Query Tuning.
- **Security, Identity & DevOps:** Cryptographic Foundations (Hashing, Merkle Trees, Asymmetric Keys), JWT Authentication, OTP Verification, OAuth 2.0, Role-Based Access Control (RBAC), Stripe Escrow, Docker, Git/GitHub, CI/CD Pipelines, AWS (EC2, S3), Firebase.

KEY BLOCKCHAIN, AI & WEB3 PROJECTS

Decentralized Intellectual Property Protection Registry | *Solidity, Ethereum Sepolia Testnet, MetaMask, Ethers.js, Etherscan, OpenZeppelin*

- Developed an immutable decentralized IP registry on the Ethereum Sepolia network, resolving proof-of-ownership and unauthorized replication disputes for digital assets.
- Built smart contract logic (IPProtection.sol) storing SHA-256 cryptographic asset hashes, enum asset classifications (Patent, Copyright, Trademark), and creator public addresses with block timestamping.
- Integrated Web3 wallet verification (MetaMask) and executed contract validation (registerIP, verifyIP) with on-chain Etherscan verification.

Pharmaceutical Supply Chain Traceability & Multi-Node Financial Settlement | *Ethereum Sepolia, MetaMask Multi-Account Architecture, Etherscan, Web3 Gas Management*

- Designed a decentralized supply chain protocol ensuring counterfeit-proof pharmaceutical provenance and automated downstream financial settlements.

Configured a 5-tier stakeholder node topology (Supplier, Manufacturer, Wholesaler, Retailer, Patient), enforcing automated tiered margin reconciliation (25% margin logic) with verified ETH value distribution and transaction finality.

Akashvani National Web Platform | *PHP, Laravel, JavaScript, HTML5, CSS3* | <https://akashvani.gov.in/>

Engineered scalable web streaming architecture for India's national broadcaster (Akashvani.gov.in), serving 275+ live radio stations, podcasts, and cultural archives to millions of daily users.

ABS Portal | ABS Support AI: Document-Grounded RAG System & Intelligent Web Platform | *Python, FastAPI, RAG, LLM Embeddings, React, TypeScript, PostgreSQL, Laravel* | <https://abs.prasarbharati.org/> | <https://abs-support-ai-web.vercel.app/>

- Architected an enterprise-grade document-grounded AI conversational assistant indexing comprehensive operational manuals to automate artist verification and booking support.
- Engineered end-to-end ingestion pipelines featuring semantic document chunking, high-dimensional vector embeddings, and low-latency retrieval integrated with Python/FastAPI services.
- Paired the AI retrieval backend with a high-performance React/TypeScript web dashboard, reducing manual tier-1 support queries for national broadcaster operations.

PB Employee Directory Web & Mobile App | *React, TypeScript, Ionic, Capacitor, REST APIs, JWT* | <https://pb-employee-directory-app.vercel.app/>

Built enterprise employee directory for Prasar Bharati staff with multi-criteria search, OTP login, JWT authentication, session management, and offline data caching across web, iOS, and Android.

Ti Care | *Swift, Stripe Escrow, WebRTC, Firebase, Twilio Video Calling & Chat*

Engineered peer-to-peer asset-sharing app with Stripe escrow payment workflows and geospatial search; built telemedicine app featuring encrypted peer-to-peer WebRTC video consultations.

Decentralized Insurance Management Protocol & Smart Contract | *Solidity (0.8.x), Ethereum EVM, Remix IDE, Smart Contract Security, Checks-Effects-Interactions*

- Engineered an autonomous decentralized insurance settlement protocol on Ethereum to eliminate manual claim intermediaries and policy fraud.
- Implemented structured policy registries (Policy, Claim) with cryptographic timestamp validation, premium collection pooling, and direct ETH settlement transfers.
- Enforced rigorous security safeguards including Reentrancy Guards and Checks-Effects-Interactions patterns to eliminate reentrancy attack vectors; emitted real-time on-chain events for full lifecycle auditability.

Cheq / Beforepay & Peer-to-Peer Fintech Systems | *Swift, Web APIs, Stripe Escrow, Cryptographic Data Verification, WebRTC, Fintech* | <https://apps.apple.com/au/app/beforepay-borrow-up-to-5000/id1478582360>

- Engineered high-security mobile fintech transaction workflows for on-demand wage advances up to \$2,000 with real-time automated underwriting and cryptographic verification.
- Architected peer-to-peer asset exchange platforms with Stripe escrow payment holds and encrypted peer-to-peer WebRTC video channels.

PROFESSIONAL EXPERIENCE

Web, AI & Mobile Developer — Prasar Bharati (National Public Broadcaster of India) | *Dec 2022 – Jun 2026 (New Delhi, India)*

- Architected ABS Support AI, a document-grounded RAG assistant with Python, FastAPI, and PostgreSQL, automating enterprise artist onboarding and operational workflows.
- Engineered the full-stack Artist Booking System (ABS Platform) in PHP, Laravel, HTML5, CSS3, and JavaScript, delivering reliable backend booking workflows and secure role-based access control.
- Built and scaled the PB Employee Directory application utilizing React, TypeScript, Ionic, and Capacitor; integrated JWT authentication, OTP verification, and resilient offline SQLite caching.
- Maintained and optimized the national Akashvani streaming portal (akashvani.gov.in) supporting high-availability audio streaming for 275+ radio stations and regional archives nationwide.
- Engineered the Shabd broadcast media distribution platform in Swift integrated with AWS S3 asset pipelines; authored architecture audit docs for Snipe-IT enterprise asset management, improving auditability by 35%.

Software Developer (Full-Stack Web & Mobile) — Hiteshi Infotech Pvt. Ltd. | *Jul 2020 – May 2022 (Indore, India)*

- Developed dynamic, scalable web applications and mobile platforms utilizing React.js, PHP, and microservices architecture with strict cross-platform compatibility.
- Engineered high-performance RESTful APIs and optimized complex relational database queries in MySQL, reducing API latency and server load by 25%.
- Implemented automated unit testing, code review standards, and CI/CD deployment pipelines, ensuring zero-defect production releases.

Mobile Application Developer — NextDay Software Solution | *Nov 2018 – Apr 2020 (Indore, India)*

- Modernized mission-critical cross-platform application modules, optimized runtime execution profiles, and achieved smooth 60fps UI rendering across Android and iOS.
- Built modular client-server networking layers, responsive web/mobile viewports, and robust local caching mechanisms for high-volume commercial clients.

Mobile Application Developer — Kavya Softech Pvt. Ltd. | May 2016 – Aug 2018 (Indore, India)

- Directed end-to-end SDLC for mobile and client web applications from requirement analysis to deployment on Apple App Store and Google Play Store.
- Enforced strict adherence to mobile security protocols, secure token credential storage, and human interface guidelines across all releases.

EDUCATION & PROFESSIONAL CERTIFICATIONS

- **Professional Certificate in Blockchain Technology & Development (6-Month Specialization) — IIT Kanpur & Simplilearn**
Rigorous academic curriculum: Blockchain Architecture, EVM Execution, Solidity Smart Contracts, Cryptography (Hashing, Asymmetric Encryption, Merkle Trees), Consensus Protocols (PoW, PoS, PBFT), Hyperledger Fabric, DLT.
- **Bachelor of Engineering (B.E.) in Electronics and Telecommunication — Indore, Madhya Pradesh, India**
Foundations in Data Structures & Algorithms, Cryptography & Network Security, Distributed Systems, Database Management Systems, Object-Oriented Software Design.
- **Full-Stack Web Development — Udemy**
Advanced modern JavaScript (ES6+), TypeScript, React, Next.js, Node.js, and API Microservices Architecture.

PERSONAL DETAILS

- **Languages Known:** English (Fluent), Hindi (Native)
- **Current Location:** Indore, India
- **Nationality:** Indian
- **Work Authorization:** Authorized to work in India / Open to Global Remote Opportunities
- **Date of Birth:** March 5, 1988
- **Marital Status:** Single
- **Strengths:** Quick Learner, Optimistic, Adaptive
- **Hobbies:** Swimming, Cycling, Travelling

DECLARATION

I hereby declare that all the information furnished above is true, complete, and correct to the best of my knowledge and belief.

Place: Indore, India
Neeleshwari Mehra